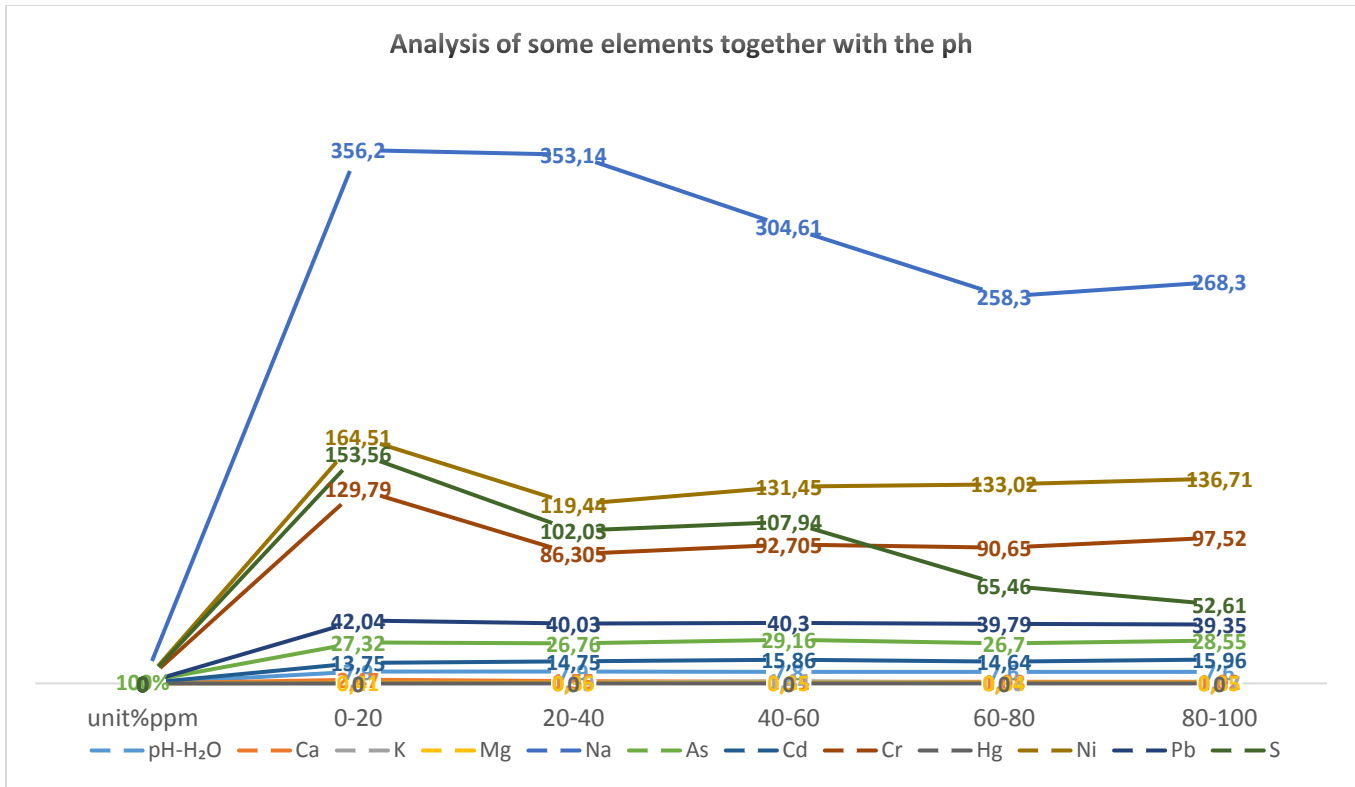


Parameters	unit%ppm	Profile depth					mg/kg.of soil
		0-20	20-40	40-60	60-80	80-100	
pH-H ₂ O		7.9	7.9	7.8	7.6	7.6	
Ca	100% Ppm	2.47	1.55	1.11	1.08	1.02	
K		0,44	0.39	1.44	0.33	0.37	
Mg		0.41	0.36	0.35	0.34	0.35	
Na		356.20	353.14	304.61	258.3	268.3	
As		27.32	26.76	29.16	26.70	28.55	
Cd		13.75	14.75	15.86	14.64	15.96	
Cr		129.79	86.305	92.705	90.65	97.52	
Hg		<1ppb*	<1ppb*	<1ppb*	<1ppb*	<1ppb*	
Ni		164.51	119.44	131.45	133.02	136.71	
Pb		42.04	40.03	40.30	39.79	39.35	
S		153.56	102.03	107.94	65.46	52.61	

Table# 4 Analysis of some elements together with the pH and the degree of soil contamination in June 2021 in the power plant Kosova A.



Table# 5 Descriptive statistics from data of month June 2021.

Variable	Descriptive Statistics										
	Valid N	Mean	Minimum	Maximum	Percentile 10	Percentile 90	Std.Dev.	Coef.Var.	Standard Error	Skewness	Kurtosis
Ca	5	1.4	1.0	2.5	1.0	2.5	0.61	42.18	0.27	1.673	2.51
K	5	0.6	0.3	1.4	0.3	1.4	0.47	79.90	0.21	2.197	4.86
Mg	5	0.4	0.3	0.4	0.3	0.4	0.03	7.67	0.01	1.881	3.77
Na	5	308.1	258.3	356.2	258.3	356.2	45.87	14.89	20.51	0.069	-2.89
As	5	27.7	26.7	29.2	26.7	29.2	1.10	3.99	0.49	0.578	-2.23
Cd	5	15.0	13.8	16.0	13.8	16.0	0.92	6.16	0.41	-0.218	-1.41
Cr	5	99.4	86.3	129.8	86.3	129.8	17.47	17.57	7.81	1.945	3.97
Ni	5	137.0	119.4	164.5	119.4	164.5	16.67	12.17	7.46	1.356	2.80
Pb	5	40.3	39.4	42.0	39.4	42.0	1.03	2.56	0.46	1.603	3.03
S	5	96.3	52.6	153.6	52.6	153.6	39.71	41.23	17.76	0.508	-0.30

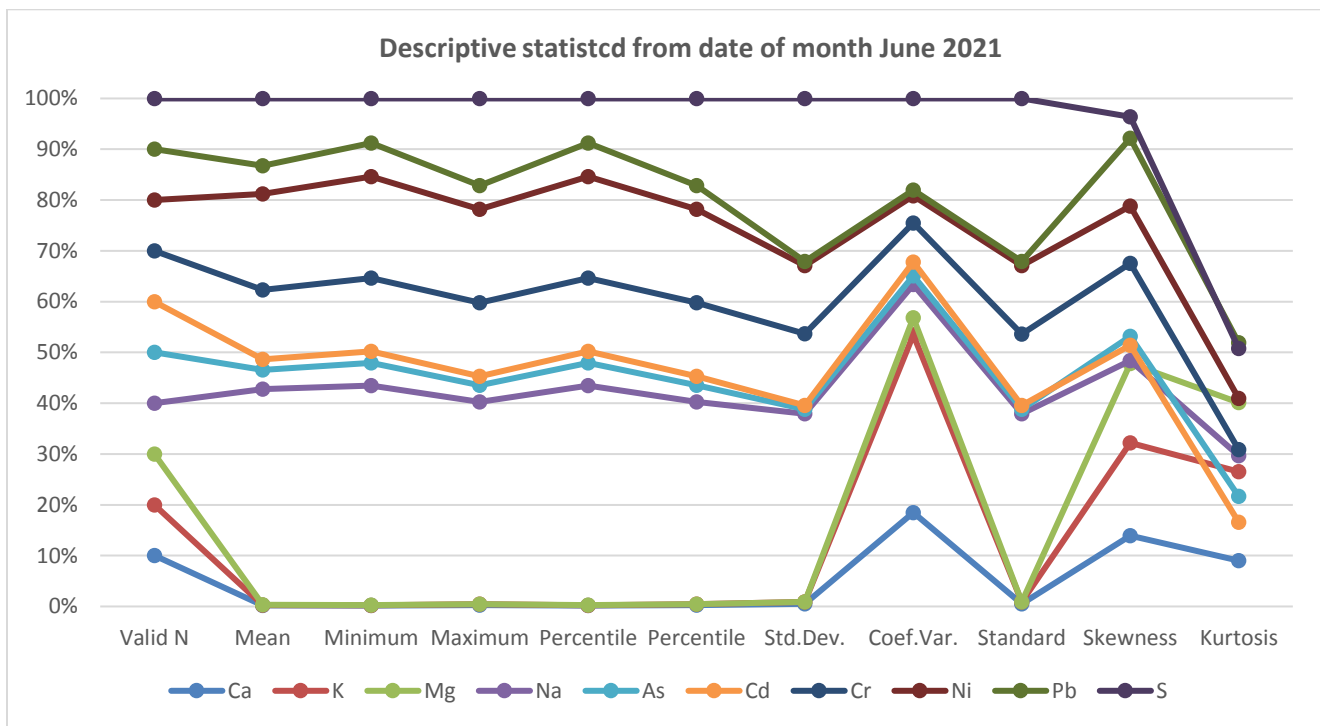


Diagram 1.1. Descriptive Statistics

Table# 6 the correlation between the researched elements and the significance during the research of June 2021.

Variable	Correlations. Marked correlations are significant at $p < .05000$. N=5											
	Means	Std.Dev.	Ca	K	Mg	Na	As	Cd	Cr	Ni	Pb	S
Ca	1	0.6	1.00									
K	1	0.5	-0.23	1.00								
Mg	0	0.0	0.98	-0.16	1.00							
Na	308	45.9	0.81	0.03	0.75	1.00						
As	28	1.1	-0.36	0.74	-0.18	-0.25	1.00					
Cd	15	0.9	-0.83	0.49	-0.72	-0.56	0.77	1.00				
Cr	99	17.5	0.85	-0.15	0.92	0.44	-0.02	-0.61	1.00			
Ni	137	16.7	0.73	-0.13	0.82	0.25	0.02	-0.55	0.98	1.00		
Pb	40	1.0	0.93	0.07	0.93	0.71	-0.15	-0.74	0.87	0.80	1.00	
S	96	39.7	0.88	0.24	0.86	0.86	-0.09	-0.64	0.70	0.58	0.95	1.00

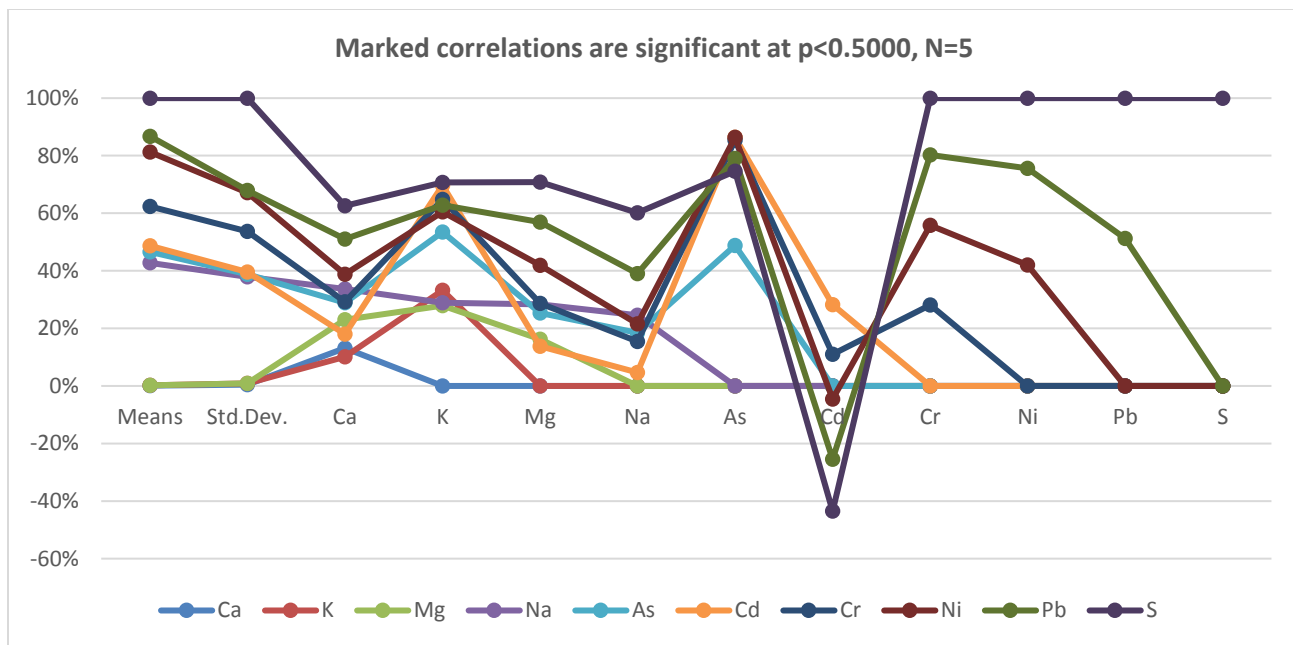


Diagram.1.2 correlations between the researched elements and the significance during the research of June 2021.

9. Results and conclusions

Samples taken near the Power Plant "Kosova A" in two time periods in January 2021 and June 2021 at depths of 0-20, 20-40, 40-60, 60-80 and 80-100 [cm]. All the results obtained during January are presented in figure # 1 as well as the correlation statistics in tables # 2 and # 3.

10. Analysis in January 2021

The results of physico-chemical analysis of soil samples at the depth presented above in January 2021 where these results will be commented separately while their comparison with the maximum allowed values was made based on the deutch list.

From the data presented in table # 1 we conclude that the values of the active reaction of the soil (pH in H_2O), in special samples taken according to the depth are in the range of 7.7-7.3 and thus we ascertain or classify in the class of weak soil alkaline.

- the content of the number of interchangeable cations in Ca, K, and Mg are expressed in% Na in mg / kg (ppm) as well as the total sulfur content,
- The obtained values show that the content of these elements is within the optimal limits and is in proportion to their dynamics in the agricultural land.
- Ca content was in the soil reaction values (pH).
- High values are presented at a depth of 0-20cm 2.21% and at a depth of 60-80cm 1.37% of the analyzed samples.

- in terms of cations are recorded as follows Mg 0.36-0.38%, and K 0.29-0.47% while the content of Na ranges around 302.45-517.00ppm while in terms of the content of total S sulfur it ranges in the range of 51.75-125.55 ppm as presented in table 1 and in terms of heavy metals As, Cd, Cr, Hg, Ni, and Pb from the obtained results and their comparison with the values determined by the deutch list the values of these elements are among the lowest and optimal values.
- High values are presented at a depth of 0-20cm 2.21% and at a depth of 60-80cm 1.37% of the analyzed samples.
- in terms of cations are recorded as follows Mg 0.36-0.38%, and K 0.29-0.47% while the content of Na ranges around 302.45-517.00ppm while in terms of the content of total S sulfur it ranges in the range of 51.75-125.55 ppm as presented in table 1 and in terms of heavy metals As, Cd, Cr, Hg, Ni, and Pb from the obtained results and their comparison with the values determined by the deutch list the values of these elements are among the lowest and optimal values.

Table 3 shows the correlation between the elements extracted in a systematic way where it is seen that between Na and Ca there is a signification and also between As and K such a thing is also shown between S and K and Ni and Cr.

11.June 2021

From the samples taken in June the results presented in tab no. 1 we can conclude that the values of the active reaction of the soil (Ph and H₂ O) in specific samples taken

according to the depth range from 7.6 to 7.9 respectively soil researched can be classified into weakly alkaline soils.

- the content of the amount of exchangeable cations Ca, K, Mg are expressed in% and Na in mg / kg (ppm) as well as the total content of S. The values obtained show that the content of these elements is within the optimal limits and is in proportion to the dynamics of tare on agricultural land,
- The exchangeable Ca content was in correlation with the soil reaction values (pH). The highest values were observed at the first depth (0-20cm) 2.47% while the lowest were at depth (80-100cm) 1.02%.
- to the cations of Mg (0.34-0.41%) and K (0.33-0.44% while the content of Na is around (258.34-356.20) while in terms of sulfur S it is in the range (52.61-153.56ppm).
- Regarding the content of chemical elements (heavy metals) As, Cd, Cr, Hg, Ni, and Pb from the research done in comparison with the values determined by the Deutch list we can conclude that the number of samples analyzed is in the range from lower.
- Regarding the correlation between the elements based on the extracted statistics it turns out that the correlation between Mg and Ca represents a significance such a thing has been observed between Pb and Ca and S with Ca,also a significance is presented between Cr and Mg and Pb with Mg, also Ni with Cr and S with Pb. All of these can be found in tab no. # 6.

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